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10/784,867

02/23/2004

Ronald G. Fink

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EXAMINER

MAYEKAR, KISHOR

ART UNIT

PAPER NUMBER

1795

MAIL DATE

DELIVERY MODE

07/30/2009

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

| | | | |
|------------------------------|--------------------------------------|------------------------------------|--|
| Office Action Summary | Application No. 10/784,867 | Applicant(s) FINK ET AL. | |
| | Examiner Kishor Mayekar | Art Unit 1795 | |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 04 May 2009.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-53 is/are pending in the application.
- 4a) Of the above claim(s) 1-17 and 33-47 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 18-32 and 48-53 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Amendment

1. The amendment of 4 May 2009 has been entered. Claims 18-22, 25, 32 and 48 have been amended and claims 1-17 and 33-47 have been withdrawn. Claims 18-32 and 48-53 are pending in this application with claims 18 and 48 being independent claims.

Claim Rejections - 35 USC § 103

2. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

3. Claims 18-23 and 27-32 are rejected under 35 U.S.C. 103(a) as being unpatentable over Say et al. (US 6,063,343) in view of Speer '963 and Kim (WO 02/102,497 A1), all references cited in the last Office action. Say's invention is directed to a device for photocatalytic purification. Say discloses in an embodiment as shown in Fig. 11 a device comprising a UV light source and a one-piece catalytic target structure surrounding the UV light source, wherein the UV light source is a germicidal lamp emitting primarily at 254 nm (Example 1) and wherein the catalytic target structure includes a surface having pleating and surrounds the UV light source (c. 10, l. 14-28). To the reaction with hydrate at the surface of the catalytic target structure, since Say discloses in the Examples the

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exposing of the catalytic target structure to the UV light source in the presence of water, the reaction is inherently in Say's teachings. The differences between Say and the above claims are that Say is silent to the UV light source with the recited UV wavelength, and the recited mechanically coupled arrangement of the catalytic target structure to the UV light source.

As to the first difference, Speer teaches in a device for treating fluids via photolytic and photocatalytic reactions the provision of the recited UV light source (c. 6, l. 31-46). The subject matter as a whole would have been obvious to one having ordinary skill in the art at the time the invention was made to have modified Say's teachings as shown by Speer because the selection of any of known equivalent UV light sources as shown by Speer would have been within the level of ordinary skill in the art.

As to the second difference, Kim teaches in a device for air purification the arrangement of a photocatalytic target structure to a UV light source such that the UV light source is mounted between a pair of support and the photocatalytic target structure is supported by the pair of support with the UV light source positioned therein (p. 7, l. 29-35). The pair of the support reads on the recited mechanically coupled arrangement. As such the selection of any of known equivalent supports to commonly support Say's catalytic target structure and UV light source would have been within the level of ordinary skill in the art.

As to the subject matter of claim 9, Say discloses it in Example 2.

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As to the subject matter of claim 20, Say discloses it in c. 4, l. 35-44.

As to the subject matter of claim 21, Say discloses it in Fig. 10.

As to the subject matter of each of claims 22 and 23, Say discloses it in c. 4, l. 7-9.

As to the subject matter of each of claims 27-32, Speer teaches the limitation (c. 8, l. 16-18 and 30-36). The subject matter as a whole would have been obvious to one having ordinary skill in the art at the time the invention was made to have modified Say's teachings as shown by Speer because this would protect the UV light source from the fluid.

4. Claims 24-26 **stand** rejected under 35 U.S.C. 103(a) as being unpatentable over Say '343 in view of Speer '963 and Kim '497 as applied to claims 18-23 and 27-32 above, and further in view of Miller (US 6,053,968). Say as applied above further discloses the provision of sensors to warn a user of the non-operational UV light source where the sensor is a photodiode and may generate an automatic service notification (paragraph crossing c. 7 and 8). The difference between the references as applied above and the instant claims is the provision the recited fiber optic cable. Miller, another reference cited in the last Office action, teaches in a device for fluid purification the provision of an indicator for indicating operational status of a UV light source (c. 5, l. 41-46). The subject matter as a whole would have been obvious to one having ordinary skill in the art at the time the invention was made to have modified the references' teachings as shown by Miller

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because the selection of any of known equivalent sensors for indicating the operational of the UV light source would have been within the level of ordinary skill in the art. The same is applied to claims 25 and 26 since Miller teaches that the indicator is optically shielded to prevent direct exposure to UV light.

5. Claims 48 and 49 **stand** rejected under 35 U.S.C. 103(a) as being unpatentable over Say '343 in view of Speer '963, Kim '497 and Miller '968, for the same reasons as stated in paragraphs #3 and #4 above and further of Say's teachings in c. 5, l. 52-65.

As to the subject matter of claim 50, since Say discloses in example different input power, it appears that Say's power supply is adjustable.

6. Claims 50-53 are rejected under 35 U.S.C. 103(a) as being unpatentable over Say '343 in view of Speer '963, Kim '497 and Miller '968 as applied to claims 48 and 49 above, and further in view of Schaible et al. (US 6,972,415 B2). Say as applied above further discloses the provision of sensors to warn a user of the non-operational UV light source where the sensor is a photodiode and may generate an automatic service notification (paragraph crossing c. 7 and 8). The differences between the references as applied above and the instant claims are the limitation recited in each of the instant claims. Schaible teaches in a system for treating fluid with UV light the limitations (Fig. 1). The subject matter as a whole would have been obvious to one having ordinary skill in the art at the

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time the invention was made to have modified the references' teachings as shown by Schaible because the selection of any of known equivalent sensor arrangements would have been within the level of ordinary skill in the art.

Response to Arguments

7. Applicant's arguments filed 4 May 2009 have been fully considered but they are not persuasive because they have been addressed in the paragraphs as set forth above.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kishor Mayekar whose telephone number is (571) 272-1339. The examiner can normally be reached on Monday-Thursday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nam Nguyen can be reached on (571) 272-1342. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on

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access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Kishor Mayekar/
Primary Examiner, Art Unit 1795